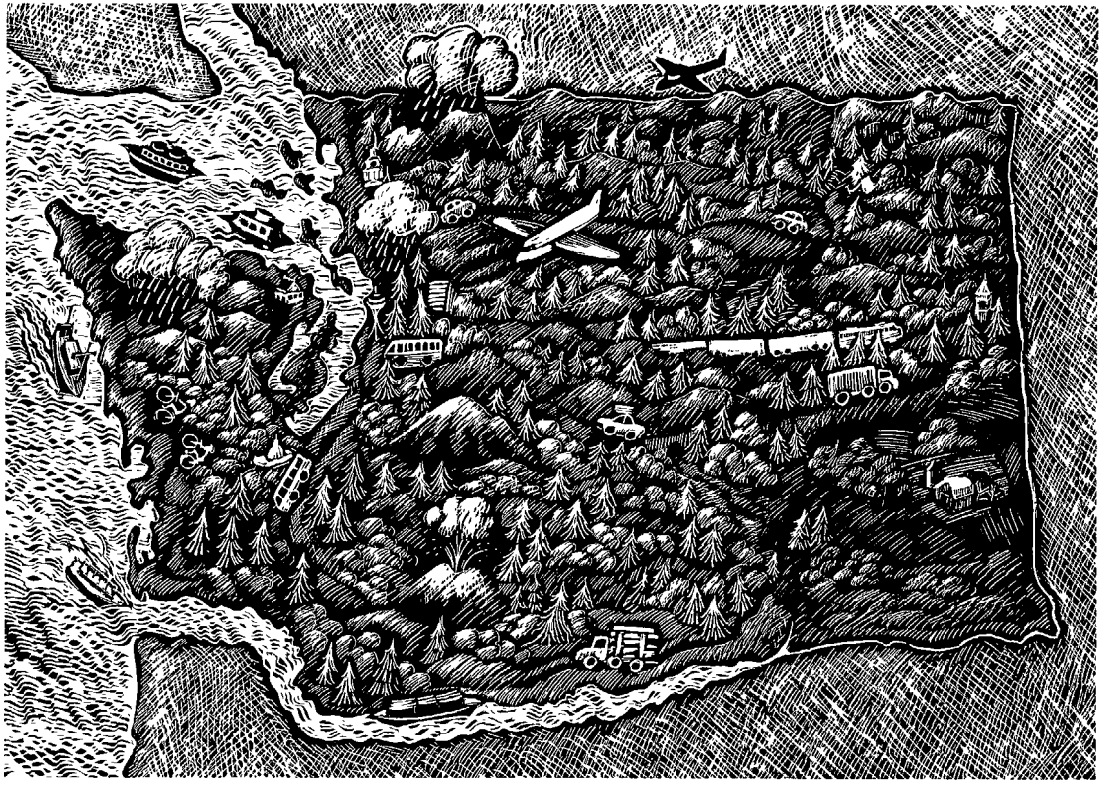
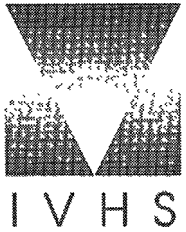
VENTURE

IVHS WASHINGTON



IVHS Strategic Plan for Washington State



VENTURE WASHINGTON

IVHS Strategic Plan for Washington State

Venture Washington is Washington's statewide program to promote the application of advanced technologies to the tasks of improving highway safety, personal mobility, environmental quality, and roadway operating efficiency.

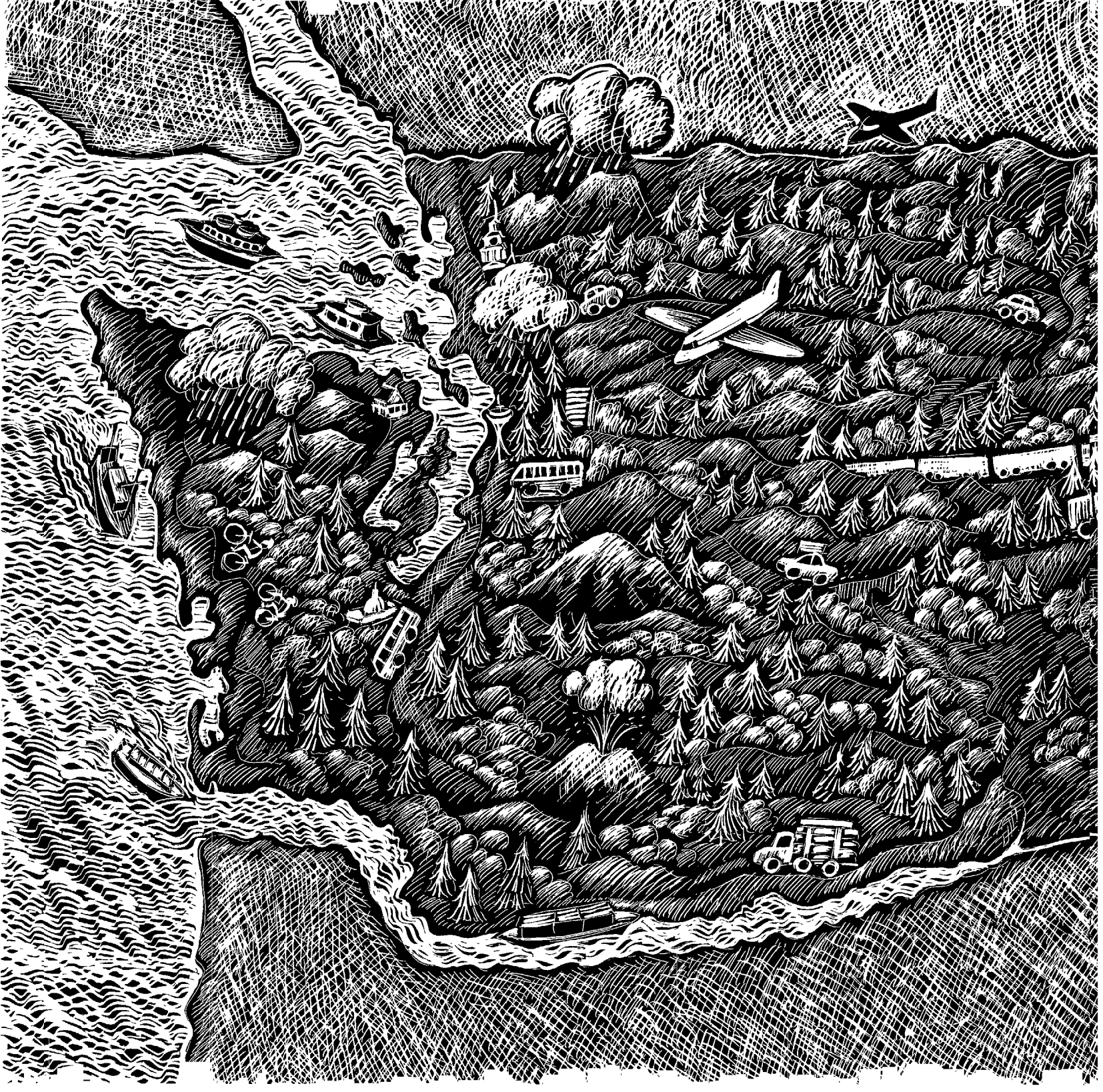
Increasing travel in the United States is threatening the mobility the nation's surface transportation system provides. Congestion, particularly in urbanized areas and along heavily traveled intercity corridors, is increasing dramatically. The cost in lost productivity attributed to congestion nationwide is an estimated $100 billion per year. This does not include the costs of highway fatalities and injuries and the costs of wasted fuel and environmental damage, which may be even higher. In general, the conventional approach of building more roads to solve these problems is no longer economically and environmentally feasible.

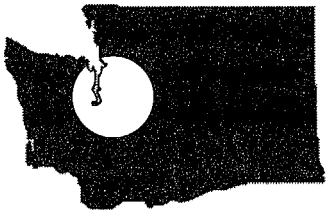
The problems affecting the nation's surface transportation system are similar in the state of Washington. Since 1970, the state's population has grown by approximately 45 percent, while the number of registered vehicles and the miles that these vehicles travel have more than doubled. This accelerated growth has resulted in some of the worst urban traffic congestion in the nation. Congestion causes delays, increases energy use, degrades safety, and creates an environment of frustration for commuters, tourists, commercial operators, and public transportation providers.

No single strategy will solve the complex set of transportation problems facing both the nation and Washington State. In recognition of this, the U.S. Department of Transportation has initiated a program known as Intelligent Vehicle-Highway Systems (IVHS). The goal of IVHS is to provide safer roadways, better inform travelers, improve traffic management, and increase the efficiency of commercial goods movements by applying advanced technology to the transportation system.

The Washington State Department of Transportation has developed a strategic plan for implementing IVHS within the state. Venture Washington is the program that will make the strategic plan a reality. The strategic plan addresses the next 20 years and beyond. Many of the actions planned are continuations of work already under way. Other planned applications will take many years before they are operational.

The IVHS strategic plan recognizes that the state of Washington comprises a unique blend of geographical regions, and it is structured to address the differing needs of each one. For each region, service provisions or improvements will take place in four key areas: traffic management, freight mobility, public transportation, and traveler information.





THE GREATER PUGET SOUND REGION

Central Puget Sound, the most urbanized area in Washington State, is the primary focus for the *state's IVHS efforts. In this region, travelers will be well informed about the real-time status of the transportation system, allowing them to make better choices about the available transportation options.*

Traffic Management

Advances in traffic management systems will keep traffic moving as the region continues to grow.

- The extensive freeway management system in the Seattle to Everett corridor, built around a state-owned fiber optic communications network, is being expanded to the south and east. Plans also call for a traffic management center and a system based on fiber optics in Tacoma.
- Interconnecting traffic signals and ramp meters in the north Puget Sound area is the first step toward integrating these systems regionally.
- Video imaging equipment will be able to automatically detect motorized and non-motorized vehicles and pedestrians and modify traffic signal timing to ensure their safe passage.
- The existing incident response program will be enhanced with methods that automatically detect incidents on the freeways.

Freight Mobility

The huge volumes of freight moving through the region will flow more efficiently.

- Weigh-in-motion sites will permit trucks to be weighed on the highway without the need to stop.

Public Transportation

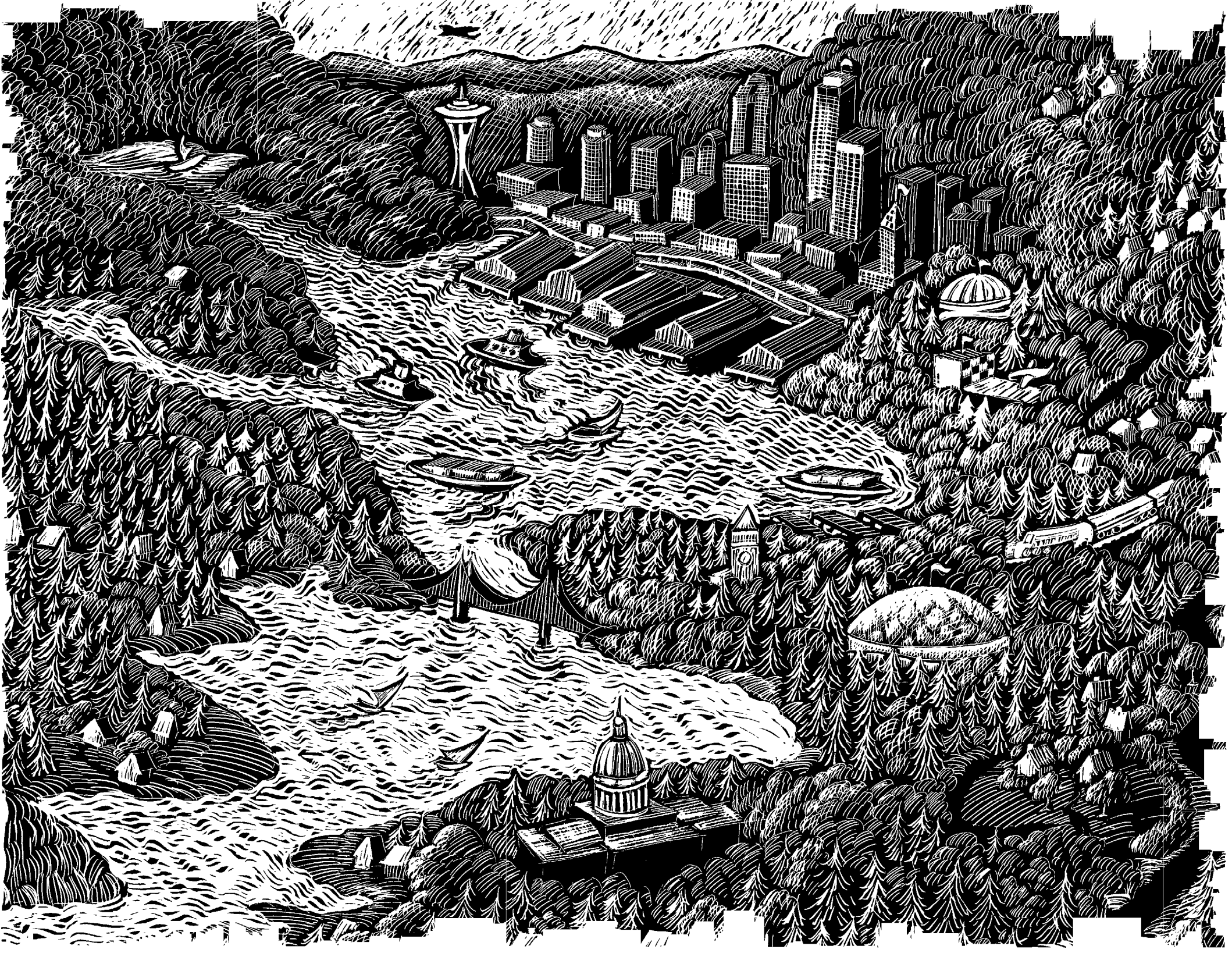
Advanced technology will help make transit use more convenient.

- Electronic debit cards will be used to pay transit fares, as well as other transportation related fees such as road or bridge tolls and parking fees.
- Projects that permit priority travel for transit, like those underway in Kitsap and Snohomish counties and Seattle, will allow traffic signal systems to focus on moving people rather than vehicles.

Traveler Information

Efforts will focus on providing travelers with comprehensive information by combining advanced technology with the extensive data collection system currently available.

- On-demand congestion information will be available through television, computers, and in-vehicle and on-person devices. Users will include commuters, truckers, fleet operators, and service and public transportation providers.
- Two operations examples of these types of projects
  - Traffic Reporter, which provides congestion-related information to commuters in an interactive format
  - Bellevue Smart Traveler, which allows commuters to form instant carpools by using telephones or pagers.



THE SPOKANE AREA

Spokane is the urban center of the Pacific Northwest inland area, which covers portions of three states. Spokane is Washington's major port of on the eastern side of the state

Traffic Management

The introduction of active traffic management and monitoring will help maintain mobility.

- A traffic management system is under development for Spokane. This system is based on low cost, state-of-the-art equipment and communications.
- The area's incident response program will be improved through better traffic data collection.
- The city's traffic signal system will be coordinated with freeway operations.

Freight Mobility

Enhanced freight mobility will keep Spokane the center of regional commerce.

- Trucks will pass freely through the area and across state borders with weigh-in-motion sites and with one-stop credential checking and permitting capabilities.

Public Transportation

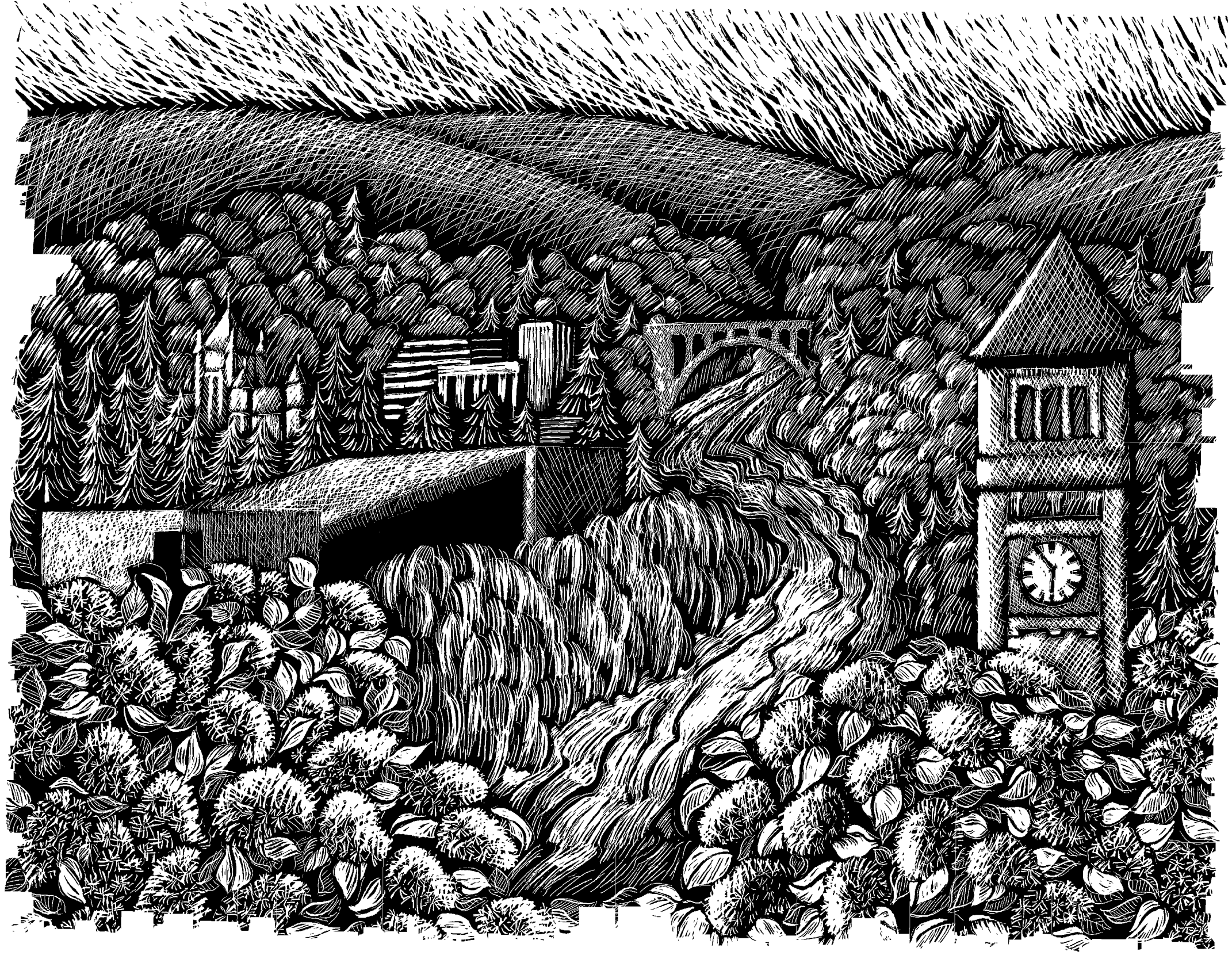
Transit will become more accessible to a larger percentage of the area's population.

- Demand responsive paratransit service will help extend service to outlying areas.
- Transit operations will be greatly improved because operators will have real-time knowledge of vehicle locations and congestion information.

Traveler Information

Comprehensive information on the area's transportation network will make traveling safer and more enjoyable.

- Pre-trip planning will be possible with more complete information on traffic conditions and travel options.
- Information on road conditions will be delivered to travelers through active roadway signs and by radio.
- Integrated traveler information databases will be delivered to homes, offices, and tourist locations through interactive television services.



THE VANCOUVER AREA

Vancouver is closely linked with the Portland, Oregon, urban area. Vancouver is an important southern port of entry for Washington and is the major crossing point for tourists and freight.

Traffic Management

A dedicated effort to improve and expand traffic monitoring will help manage the problems of growing traffic congestion.

- Traffic information will be shared between Vancouver and Portland's traffic management center, which is now under development.
- Increased data collection from the area's roadways will improve the effectiveness of the existing incident response program.
- Freeway operations will be coordinated with the signal systems of connecting streets and highways.
- A traffic management center for Interstates 5 and 205 and other key routes will be developed.

Freight Mobility

Streamlining paperwork will help reduce the effort needed to keep commerce moving.

- A multi-state permitting system will improve the efficiency of freight mobility across state lines.

Public Transportation

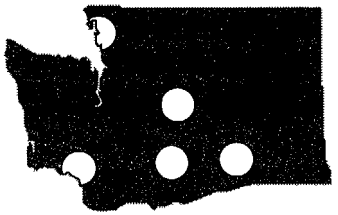
Transit will expand its role, becoming a more attractive alternative.

- Automatic fare collection systems will make using transit easier.
- Coordinating transit scheduling with traffic signal timing will help transit run more efficiently.

Traveler Information

Development of a system to collect traffic information will help travelers make better informed choices.

- Comprehensive traffic information will be provided to travelers before their trips.
- Visitors to the state will receive information on travel and destinations through travel information centers.
- Radio and variable message signs will provide travelers with important information about the roadway system.



OTHER STATEWIDE URBAN AREAS

The smaller, but growing and important, urban areas throughout the state will continue to increase their roles as regional centers for commerce, transportation, and tourism.

Traffic Management

Improvements in gathering road and traffic information and the delivery of this information to travelers will enhance mobility.

- Information on weather and road conditions will be provided to travelers.
- Traffic management on key arterials and highways will promote safe and efficient traffic movement.
- Expanded data collection on major roadways will help in planning future transportation improvements.
- Incident response programs will reduce the impacts of major accidents on travelers.

Freight Mobility

Improvements in the efficiency of freight movement will contribute to the economies of these areas.

- Weigh-in-motion sites will permit trucks to be weighed on the highway without the need to stop.

Public Transportation

Transit will become more versatile and user responsive.

- Local transit system operations will improve with the availability of real-time information about road and weather conditions.
- Real-time transit dispatch capabilities will make personalized pickup services attractive to residents living in areas of low population density.

Traveler Information

Travel decisions will be easier to make as more information about the transportation system becomes available.

- Changeable message signs and radio systems will provide travelers with important information about the roadway system.
- Information on weather and road conditions will be made available to visitors.

RURAL AREAS AND INTERCITY CORRIDORS

The vast array of highways connecting the hundreds of small communities throughout the state is a key to successful tourism and goods movement. In these areas the primary transportation focus is on intercity travel and the provision of safe and efficient travel between and within rural communities.

Traffic Management

Expanded data collection and communications along rural roadway corridors will make travel in these areas safer.

- Mayday systems will permit immediate response to accidents and will allow people to call for assistance in remote locations.
- Sections of roadway that experience frequent weather related problems will be monitored, and information will be delivered directly to those traveling the roadway.

Freight Mobility

Commerce will travel more freely between cities and across national boundries.

- A system to give pre-clearance to trucks crossing the Canadian/U.S. border will be implemented.
- Weigh-in-motion sites and one-stop credential checking and permitting will help ease the regulatory time demands on trucking.

Public Transportation

Transit will become more accessible in remote locations.

- Demand responsive paratransit service will enhance mobility for rural residents.
- Automatic vehicle location systems will permit more efficient transit operations.

Traveler Information

Trip decisions will be easier to make with the increased availability of current travel information.

- Information on travel conditions will be delivered to travelers through active roadway signs and by radio.
- Information on statewide and regional attractions and accommodations will be readily available to visitors.